WEB END

CROSS REFERENCE TO RELATED APPLICATION

[001] This Non-Provisional Application claims benefit to United States Provisional Application Serial No. 60/440,213 filed January 15, 2003.

FIELD OF THE INVENTION

[002] The present invention relates generally to lanyards and more particularly to closures for lanyards that snap onto lanyard ends and are used to hold security or trade show identification badges or the like.

BACKGROUND OF THE INVENTION

[003] It is known that lanyards are used to suspend identification or security badges, keys, cell phones, or other objects around a person's neck. Conventional lanyards include the use of a small cord or rope that is joined together at the cord ends to form a loop that fits over a person's head and around the neck. There are several known techniques to join the cord ends of the lanyard to form a loop. These techniques include tieing or gluing the cord ends together, or using multiple fastener components that must be attached onto the cord ends and then secured together. Typically, a ring or hook is connected to the formed loop to secure or suspend an object, such as an identification badge, around the person's neck.

[004] These known lanyards and techniques for joining the lanyard cord ends, however, have certain drawbacks. For example, known lanyards use multiple components to join the lanyard cord ends resulting in greater complexity of the product, use of special tools, and increased difficulty in the use of the product. In addition, many of the known multiple components used to join lanyard cord ends are unreliable, have a high initial purchase cost, and an overall high cost application. The present invention is directed at overcoming these and other known problems and drawbacks with existing lanyards and specifically the problems associated with joining lanyard cord ends.

SUMMARY OF THE INVENTION

[005] The present invention is directed to a lanyard that uses a single component to join the ends of the lanyard cord. The single component, referred to as a web end, folds together over

the lanyard cord ends and snap fits onto the ends to secure the cord ends together. To secure the cord ends together, the web end uses numerous pins extending out from the web end that will engage with numerous pin pockets after the web end is folded together. The lanyard cord ends are trapped between the numerous pins and pin pockets. A ring, hook or other attachment member may be connected to the web end to attach an identification badge or other object to the lanyard. With the present invention, the web end is easily attached by hand to the lanyard cord ends without the use of special tools.

[006] Other features and advantages of the invention will become apparent to those skilled in the art upon review of the following detailed description, claims and drawings in which like numerals are used to designate like features.

BRIEF DESCRIPTION OF THE DRAWINGS

[007] FIG. 1 is an isometric view of an exemplary web end of the present invention.

[008] FIG. 2 is another isometric view of the invention of FIG. 1.

[009] FIG. 3 is an isometric view of the installation of the invention of FIG. 1 onto the cord ends of a lanyard.

[0010] FIG. 4 is a cross-section view of the invention of FIG. 1 installed onto the cord ends of a lanyard.

[0011] FIG. 5 is an isometric exploded view of an attachment that may be mounted onto the invention of FIG. 1.

[0012] FIG. 6 is an isometric view of the assembly of the attachment of FIG. 5 to the invention of FIG. 1.

[0013] FIG. 7 is an isometric view of the assembly of the invention of FIG. 1 and the attachment of FIG. 5 with a lanyard.

[0014] FIGS. 8-11 illustrate various views of an alternative web end according to the present invention.

[0015] FIGS. 12-15 illustrate various views of yet another alternative web end according to the present invention.

[0016] FIGS. 16-19 illustrate various views of still another alternative web end according to the present invention.

[0017] Before the embodiments of the invention are explained in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangement of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced or being carried out in various ways. Also, it is to be understood that the phraseology and terminology used herein are for the purpose of description and should not be regarded as limiting. The use of "including" and "comprising" and variations thereof is meant to encompass the items listed thereafter and equivalents thereof as well as additional items and equivalents thereof.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0018] Referring to FIGS. 1 and 2, an exemplary embodiment of the invention is depicted as a one-piece web end 10. The web end 10, also referred to as a clip, is used to secure together the opposing ends of a lanyard cord. Once secured together, the lanyard forms a loop that may be placed over a person's head and around the neck. The web end 10 may also receive an attachment member, discussed below, that can be used to mount or connect an identification badge, tag or other object to the lanyard.

[0019] As illustrated in FIGS. 1 and 2, the web end or clip 10 is depicted in an open, unattached and unsnapped position. In this position, the web end 10 defines an outer surface wall 12, an inner surface wall 14, and opposing ends 16, 18. Located between and connecting the opposing ends 16, 18 of the web end 10 are hinges 20, 21 that permit the opposing ends 16, 18 to fold together. It should be understood that the invention may use fewer hinges to permit the folding together of the ends 16, 18. Located between the hinges 20, 21 is a central portion 43 defining a central aperture 44 that is used to connect an attachment 50 to the web end 10, as shown in FIGS. 5 and 6 and discussed in more detail below. Also depicted in FIG. 1, the web end 10 includes integral stabilizing ribs 22 that extend outwardly from the inner surface of the central portion 43. In use, the stabilizing ribs 22 engage stabilizing rib recesses 24 formed in the body of the web end 10 to align the opposing ends 16, 18 of the web end 10 when the web end 10 is folded together and attached to the cord ends of the lanyard. In an exemplary embodiment, the stabilizing ribs 22 and rib recesses 24 are positioned near the peripheral edge 30 of the web end 10 and adjacent or in close proximity to the hinges 20, 21. The web end 10 is preferably made from a plastic material, polymer, or similar suitable material.

[0020] Also shown in FIG. 1, the web end 10 includes on the inner surface wall 14 a plurality of conical shaped interlocking pins 26 that are spaced apart in an array. Also spaced apart in an array is a plurality of pin pockets or pin receptacles 28. The pins 26 and pin pockets 28 are located on both ends 16, 18 of the web end 10 and are positioned on the web end 10 such that when the web end 10 is folded at the hinges 20, 21, and over the cord ends, the pins 26 and pin pockets 28 mate with each other, as illustrated in the embodiment shown in FIGS. 3 and 4. In use, the mated plurality of pins 26 and pin pockets 28 will trap and secure the cord ends 40, 42 to the web end 10 and will prevent movement of the cord ends 40, 42 relative to the web end 10 under an applied tension, as shown in FIG. 4. In other words, when the ends 16, 18 of the web end 10 are folded onto the cord ends 40, 42, the interlocking pins 26 on one end of the web end 10 will pierce through the cord ends 40, 42 and extend into and mate with the pin pockets 28 on the opposing end of the web end 10 to securely hold the web end 10 onto the cord ends 40, 42. With the invention, the cord ends 40, 42 are prevented from being pulled out of the web end 10 under an applied tension.

[0021] Referring to FIG. 4, each of the pins 26 define a pin tip 32 that extends into the pin pocket 28 and is held in place in the mating pin pocket 28. As the cord ends 40, 42 are pulled or placed under an applied tension, the pin 26 will have a tendency to bend about its base 34 until the tip 32 of the pin 26 contacts that inner wall 36 of the pin pocket 28 at which point the pin 26 is prevented from bending any further. With this construction, the premature pull-out of the cord ends 40, 42 is greatly improved. It should be understood that while the disclosed plurality of pins 26 have a conical shape and extend outwardly from the inner surface wall 14 of the web end 10, the pins 26 may take on other various shapes, such as pyramids, columns, squares or similar shapes, and still achieve the desired securement of the cord ends 40, 42 to the web end 10. It should also be understood that other arrays, configurations, and numbers of pins 26 and pin pockets 28 are possible and may be used with the present invention.

[0022] Referring back to FIGS. 1 and 2, the web end 10 includes the central aperture 44 located between the hinges 20, 21 for mounting the web end 10 to an attachment member 50, as discussed below. The central aperture 44 may take on numerous shapes, such as round, square, geometrical, or non-geometrical configurations, or other similar shapes and configurations, to receive various types of attachment members, as known in the art. The web end 10 further may include a plurality of locking tabs 46 extending outwardly from the inner surface wall 14. In the

exemplary embodiment, the locking tabs 46 are located around the peripheral edge 30 of the web end 10. It should be understood that the invention is not limited to the illustrated location of the locking tabs 46 as one or more of these tabs could be located at a position on the web end 10 not at the peripheral edge 30. These locking tabs 46 are received within a plurality of openings 48 also located in the exemplary embodiment around the peripheral edge 30 of the web end 10 when the web end 10 is folded at the hinges 20, 21. These plurality of locking tabs 46 and openings 48 permit the opposing ends 16, 18 of the web end 10 to interlock and snap together.

[0023] As illustrated by FIG. 3, the interlocking of the opposing ends 16, 18 of the web end 10 onto the cord ends 40, 42 is easily accomplished by hand without the use of special tools. As exemplified and explained above, the cord ends 40, 42 are inserted between the opposing ends 16, 18 of the web end 10. The web end 10 is folded at the hinges 20, 21 with the stabilizing ribs 22 aligning with the stabilizing recesses 24. The pins 26 and pin pockets 28 on the inner surface wall 14 of the web end 10 secure the cord ends 40, 42 in position by trapping the cord ends between engaging pins 26 and pin pockets 28. The plurality of locking tabs 46 and openings 48 positioned along the peripheral edge 30 of the web end 10 interlock with each other and by merely applying hand pressure to the opposing ends 16, 18, cause the opposing ends 16, 18 to snap together, thereby securing and trapping the cord ends 16, 18 within the web end 10. As should be readily apparent, the web end 10 of the present invention is more readily installed than other known devices because of this ergonomically advantageous assembly. It should also be readily apparent to one of skill in the art that other shapes, designs, and features of the web ends are possible with the present invention.

[0024] Referring to FIGS. 5 and 6, there is depicted an attachment member 50 that may be installed onto the web end 10. Specifically, in an exemplary embodiment, the attachment member 50 includes a loop 52 and a projection 54 extending outwardly from the loop 52. The projection 54 is sized and shaped to snap fit into the central aperture 44 of the web end 10 to secure the attachment member 50 onto the web end 10. An identification badge or other object may be attached to the loop 52 of attachment member 50. It should be understood that other shapes, designs and styles of attachment member 50 and loop 52, such as uniform, geometric, non-uniform or non-geometric shapes, designs and styles may be used with the present invention.

[0025] Referring to FIG. 7, there is depicted a lanyard 70 typically used to secure or suspend from a person's neck a small object, such as an identification badge or tag. The lanyard 70 includes a cord, which may be a webbing material 72 that forms a large loop 74 that, in use, is placed over a person's head and around the neck. The lanyard 70 defines cord ends 40, 42. Mounted to the cord ends 40, 42 of the lanyard 70 is the web end 10 of the present invention. As discussed above, the web end 10 snap fits onto the cord ends 40, 42 and secures the cord ends together. Also, as discussed above, mounted to the web end 10 is the attachment member 50 that is used to connect or mount an identification badge or other object, not shown, to the lanyard 70.

[0026] FIGS. 8-19 illustrate various views of alternative designs according to the present invention.

[0027] Variations and modifications of the foregoing are within the scope of the present invention. It should be understood that the invention disclosed and defined herein extends to all alternative combinations of two or more of the individual features mentioned or evident from the text and/or drawings. All of these different combinations constitute various alternative aspects of the present invention. The embodiments described herein explain the best modes known for practicing the invention and will enable others skilled in the art to utilize the invention. The claims are to be construed to include alternative embodiments to the extent permitted by the prior art.

[0028] Various features of the invention are set forth in the following claims.